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Patients' satisfaction with healthcare: comparing general practice services in a tertiary and primary healthcare settings

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Abstract:

Background: *Patient satisfaction with healthcare is predictive of their likelihood of continuing use of available healthcare; comply with medical instruction and improvement in overall coverage and effectiveness of care. This research compared the level of patients' satisfaction with general practice care delivered at physicians-manned General Outpatient clinics at tertiary and primary health centres in Rivers State.*

Method: *This comparative cross-sectional study was conducted using the Patient Satisfaction Questionnaire (PSQ-18). A total of 1290 regular patients were recruited by systematic random sampling. Non-parametric analyses such as median satisfaction scores, Chi-square, Kruskal-Wallis and Mann-Whitney U test were conducted using SPSS version 20 statistical software. A p-value <0.05 was considered statistically significant*

Result: *Study showed patients who received care at the comprehensive health Centre were significantly more satisfied in domains such as patient-doctor communication (p<0.001), interpersonal manner (p<0.001), accessibility and convenience (p<0.001), technical quality (p=0.006), financial aspects of care (p<0.001) and general satisfaction (p<0.001) than their counterparts at the tertiary Centre. There was no statistically significant difference with time spent during consultations in both centres (p=0.583). Other predictors of satisfaction were younger age, male gender, married, higher education, and those of the Moslem religious faith.*

Conclusion: *Patients who sought general practice care from the health Centre were more satisfied that those who did at the tertiary Centre. We recommend increased sensitization on patients' utilization of primary health care systems as first contact, continuing, comprehensive and efficient personal and non-personal healthcare needs.*

Keywords: *General practice, Patients' satisfaction, predictors of satisfaction, Primary health Centre, Tertiary health Centre*

The Nigerian Health Journal

INTRODUCTION

Investigating patients' satisfaction with care is increasingly being used as a means of assessing and improving the quality of health care.[1, 2] The research on patient satisfaction is affected by a lack of universally accepted definition of the concept of quality and satisfaction.[3] Although quality could mean different things to different people, its definition in relation to health care should take into account the views and feelings of the patients for it to be meaningful.[4] The current focus on patient

centredness and accountability in the delivery of health services, is forcing health care delivery systems to investigate how satisfied patients are with the care they received.[3] Findings from patients' satisfaction studies are being used for quality improvement and better allocation of resources.[5] Patient's satisfaction as an indicator of quality describes the extent patients regard health care service as useful, effective or beneficial[6] and can be appreciated with the use of theoretical models like the *'value-expectancy model*'; the '*fulfillment model*' and the '*discrepancy model'*[7]

The findings of patients' satisfaction surveys can thus be used for a wide range of settings to identify problems or undertake potential quality improvement in health care.[8-10] Indeed, studies on patient satisfaction have been conducted to assess the activities of specific group of health professional, specific aspect(s) of health care or the entire health care system.[11-15]
The practical benefits include the fact that the satisfaction of patients can predict their future utilization of healthcare, compliance with current treatment, continuity of care and ultimately the effectiveness of care.[16, 17] Furthermore, patients who are more satisfied and well informed are unlikely to make unnecessary visits and more likely to recommend the use of the health provider.[18, 19] On the contrast, dissatisfied patients are more likely to have adverse health outcomes[20] while some may resort to unorthodox care and self-help.

The decline in the delivery of health care in Nigeria over time, had resulted in loss of consumer confidence in existing services, under-utilization of primary health care (PHC) services with attendant over-dependence on the tertiary health care (THC) facilities.[21] Previous studies on patients' assessment of PHC and THC showed lapses in relation to timeliness of delivery care, waiting time, physical environment, medication communication, inadequate communication between staff and patients, continuity of care and patient follow-up.[22-31] None of these studies compared the findings from PHC and THC settings. This can be done using general practice care that is delivered in primary, secondary and tertiary health facilities in Nigeria.

The purpose of this study was to compare the level of Patient satisfaction with general practice care delivered in the General Outpatient clinics of the University of Port Harcourt Teaching Hospital (a Tertiary Health Centre) and that of the Comprehensive Primary Health Center, Aluu (a Primary Health Centre). Study also explored other predictors of patients' satisfaction among the study population.

MATERIALS AND METHODS

Study design

This was a comparative cross-sectional study.

Study area

Study was carried out in the General outpatient department of the University of Port Harcourt Teaching Hospital (UPTH) and the Comprehensive Health Center (CHC) in Aluu. The UPTH is one of two tertiary health care centers in Port Harcourt, the capital of Rivers State, South-South Nigeria. Although located in Obio-Akpor Local Government Area of Rivers State, the catchment area of the hospital extends beyond Rivers State, to include much of the Niger delta region; a catchment

The Nigerian Health Journal

population that can be conservatively put at ten million people. The hospital is about 800-bed multi-specialist teaching hospital that offers tertiary, secondary and primary health care services.

The CHC, Aluu is a practice facility managed by the community medicine department of the University of Port Harcourt Teaching Hospital, Port-Harcourt and located in a semi-rural community about 5km from the teaching hospital. It was designed to provide primary health care services to Aluu and neighboring communities.

Study population

The study population comprised of adult men and women from 18 years who received care at the general outpatient clinic of the University of Port Harcourt Teaching Hospital and the Comprehensive Primary Health care center, Aluu.

Sampling

Patients were recruited from the sample frame of all those that attend the outpatient clinic daily. Systematic random sampling was done using a sampling interval of 1:2 from the sample frame of all those given numbers to be seen in the clinic each day. The minimum sample size of 605 for each centre included in this study was calculated using the formula for comparative design with categorical data.[32] An increase to 645 per group was considered large enough to account for a 5% non-response or inappropriate entry and also for the conduct of additional statistical analysis that was required in the study.

Study procedure

Patients attending the General outpatient services at UPTH and CHC, Aluu, who were not too sick to participate, 18 years old or older and give consent to participation were included in the study. Patients who were too sick to participate and those that declined consents to participate were excluded. Two research assistants who received specific training on objectives of the research, the procedures for data collection, eligibility criteria, and data sampling techniques formed part of the research team. The research assistants administered the questionnaires, offered assistance to respondents and retrieved completed questionnaires.

Study instrument

The Patient Satisfaction Questionnaire (PSQ-18) is an 18-item validated measure with 5-point Likert-type response format for assessing patients' satisfaction on health care along seven dimensions of quality (communication, interpersonal manner, accessibility and convenience, technical quality, time spent during consultation, financial aspects of care and general satisfaction).[33] The multi-point, multi-dimensional scale was designed for exit interviews after patient's encounter with health care. Items defining the seven subscales were: communication (item 1 and 2), time spent with doctor (item 3 and 4), interpersonal manner (item 5 and 6), accessibility and convenience (item 7, 8, 9 and 10), general satisfaction (item 11 and 12), technical quality (item 13, 14, 15, and 16) and financial aspects (item 17 and 18).[33] The face and content validation of the scale was conducted to enhance the clarity and comprehensibility of the content of

The Nigerian Health Journal

the questionnaire for the local population. These processes were achieved using 'think aloud' sessions with 20 patients and review by three local experts. There were eventual modifications in wordings for items' 1, 5, 9 and 12 as shown in the Box below:

Box highlighting modifications made to four items in the PSQ-18

Item number	Original Items from the PSQ-18	Modified Items equivalent
1	Doctors are good about explaining the reasons for medical tests to me	Doctors explain the reason(s) for medical tests very well to me
5	Doctors act too business like and impersonal toward me	Doctors act too official and impersonal towards me
9	I find it hard to get an appointment for medical care right away	I find it hard to get the chance to see my doctor as soon as I need to
12	I am dissatisfied with some things about the medical care I receive	I am not satisfied with some things about the medical care I receive

Data processing and analysis

The PSQ-18 used for this research has 9 positively-worded items (worded in such a manner that agreeing denotes satisfaction with the health care received) and 9 negatively-worded items (worded such that agreeing denotes dissatisfaction with the health care received) evenly distributed in the 7 subscales. Data was collected over 2-month period and analysed using version 20 of the Statistical Package for Social Sciences[34]. During analysis, negatively worded questions were reversed and recoded such that higher ratings denote higher satisfaction with the medical care received. Items with inappropriate or complete information were excluded before analyses. Descriptive analyses included use of frequency, percentages, median and quartiles, box plots while non-parametric statistics such as the Mann Whitney U test and Kruskal-Wallis H test, Chi-Square test were used for confirmatory data analyses. Data was presented in charts, graphs and tables with P-value set at 0.05 at 95% confidence interval.

Ethical approval

Ethical approval was sought and given by the University of Port-Harcourt Research Ethics committee; permissions were also received from the Head of family medicine, and community medicine, UPTH. Individual participant gave their consent after receiving detailed information on the research and their participation.

RESULTS

A total of 1290 ambulatory patients shared equally were recruited for this survey in both centres and response rate was 100%. Table 1 shows the characteristics of all the respondents with more being females (66.8%), young adults aged 20 – 39 years (72.4%), patients who are married (47.6%), those who had attained level of schooling beyond primary grade (81.6%), those not in paid employment (43.6%).

The Nigerian Health Journal

Table 1: Characteristics of patients in the study

Characteristics	Frequency (%)		
	PHC	THC	Total
Gender			
Male	185 (28.7)	243 (37.7)	428 (33.2)
Female	460 (71.3)	402 (62.3)	862 (66.8)
Marital status			
Single	280 (43.4)	261 (40.5)	541 (41.9)
Married	297 (46.0)	317 (49.1)	614 (47.6)
Widowed/divorced	68 (10.5)	67 (10.4)	135 (10.5)
Age			
< 20 years	15 (2.3)	30 (4.7)	45 (3.5)
20 – 39	439 (68.1)	495 (76.7)	934 (72.4)
40 – 60	153 (23.7)	98 (15.2)	251 (19.5)
>60	38 (5.9)	22 (3.4)	60 (4.7)
Schooling			
Primary or less	129 (20.0)	108 (16.7)	237 (18.4)
More than primary	516 (80.0)	537 (83.3)	1053 (81.6)
Occupation			
Not working	325 (50.4)	237 (36.7)	562 (43.6)
Self-employed	132 (20.5)	175 (27.1)	307 (23.8)
Working for others	188 (29.1)	233 (36.1)	421 (32.6)
Perceived health status			
Less than good	229 (35.5)	382 (59.2)	611 (47.4)
At least good	416 (64.5)	263 (40.8)	679 (52.6)

PHC – Primary Health Centre, THC – Tertiary Health Centre

Table 2 compares respondents' assessments on various practice attributes between the primary and tertiary health centres. Patients who attended the primary health centre were significantly more satisfied ease of access to specialist ($p<0.001$), waiting time ($p<0.001$), getting to see the generalist ($p = 0.002$), accessing needed medical care ($p<0.001$), happy with the actual care received ($p<0.001$), diagnosis by the doctor ($p<0.001$), technical performance of the doctor ($p<0.001$) and ease of financing health care ($p<0.001$). On the contrary, those who attended the tertiary health centre were significantly more satisfied with available infrastructure for care in the doctor's office ($p<0.001$).

The Nigerian Health Journal

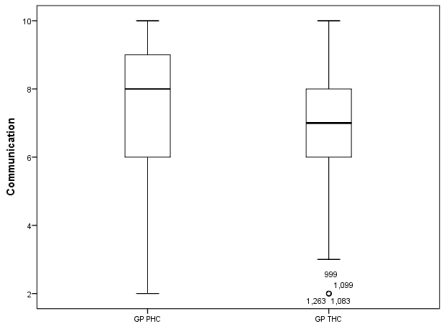
Table 2: Comparing frequencies of categorical responses

ǂItems in PSQ-18	Agree/strongly agree – Frequency (%)		¶P-value
	PHC	THC	
Doctors explaining the reason(s) for medical test very well to me	447(69.3)	469(72.7)	0.180
Doctors/health do not ignore what I tell them	415(64.3)	338(52.4)	0.001
Those who provide my medical care do not hurry too much	494(76.6)	490(76.0)	0.840
Doctors usually spend plenty of time with me	350(54.3)	367(56.9)	0.370
Doctors don't act too official and impersonal towards me	415(64.3)	405(62.8)	0.600
My doctor treats me in a very friendly and courteous manner	340(52.7)	294(45.6)	0.012
I have easy access to medical specialists I need	382(59.2)	266(41.2)	0.000
People don't have to wait too long for emergency treatment where I get care	478(74.1)	340(52.7)	0.000
I don't find it hard to get a chance to see my doctor	501(77.7)	450(69.8)	0.002
I am able to get medical care whenever I need it	436(67.6)	373(57.8)	0.000
Medical care I am receiving is just about perfect for me	348(54.0)	225(34.9)	0.000
I am satisfied with the medical care I receive	412(63.9)	487(75.5)	0.000
I think my doctor's office has what is needed to provide complete care	355(55.0)	466(72.2)	0.000
Doctors don't make me wonder if their diagnosis is correct	419(65.0)	312(48.4)	0.000
When I go for medical care they are careful about examining me	326(50.5)	310(48.1)	0.400
I don't have doubts about the ability of the doctors who treat me	361(56.0	185(28.7)	0.000
I feel confident I can get the medical care I need without financial setbacks	341(52.9)	238(36.9)	0.000
I don't have to pay more for my medical care than I can afford	272(42.2)	338(52.4)	0.000

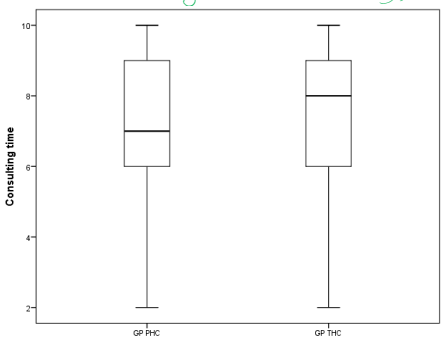
¶ Fisher's Exact test, ǂ Negatively worded questions (2,3,5,8,9,12,14,16 and 18) were reversed, PHC – Primary Health Centre, THC – Tertiary Health Centre

The box plots in Figure 1 shows the score distribution along the various domains on the scale. Each of the plots showed the median, 25th percentile, 75th percentile, maximum, minimum values as well as outliers in the distribution.

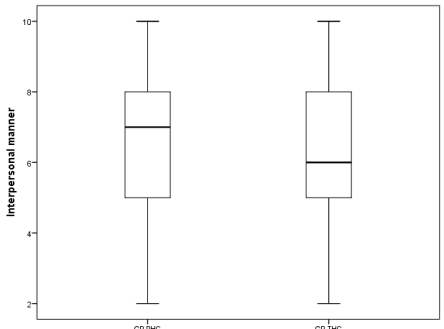
The Nigerian Health Journal



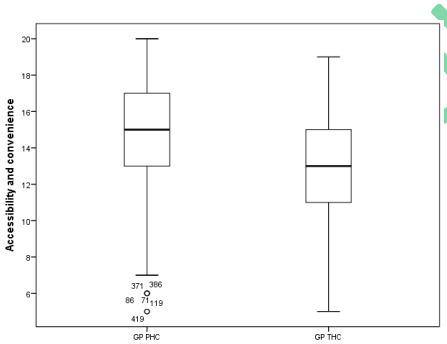
Boxplot comparing satisfaction with doctors' communication in PHC and THC



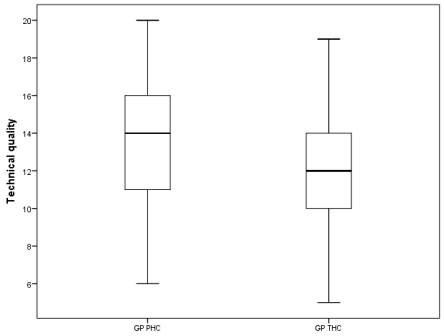
Boxplot comparing satisfaction with consulting time in PHC and THC



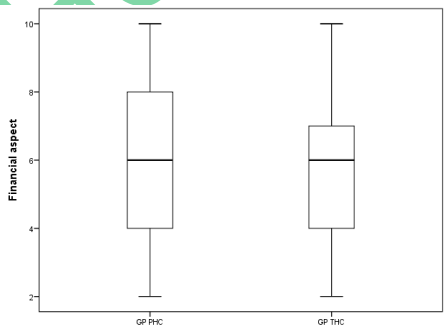
Boxplot comparing satisfaction with interpersonal manners in PHC and THC



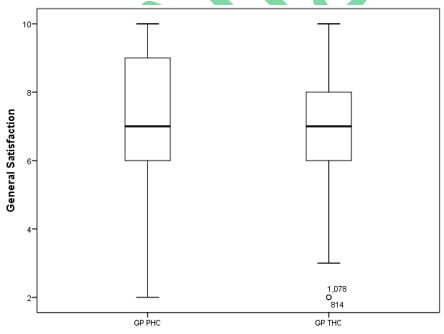
Boxplot comparing satisfaction with accessibility and convenience in PHC and THC



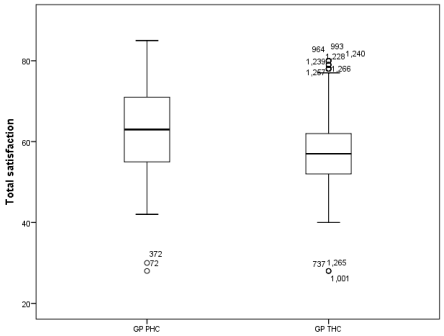
Boxplot comparing technical quality of general practice in PHC and THC



Boxplot comapring financial aspects of general practice care in PHC and THC



Boxplot comparing general satisfaction with general practice in PHC and THC



Boxplot comparing total satisfaction (all subscales) in PHC and THC

Figure 1. Box plots comparing the level of satisfaction on various aspects of general practice between the Primary Health Centre (PHC) and the Tertiary Health Centre (THC). Each box plot shows the 25th (lower quartile), 50th (median), 75th percentile (upper quartile), minimum, maximum score and outliers in the distribution.

The level of satisfaction with the various domains in the scale was compared between the primary and tertiary centres and findings are presented in Table 3. Patients who received general practice care from the primary health centre reported significantly higher level of satisfaction with communication (p<0.001), interpersonal relationship (p<0.001), physical access (p<0.001), technical quality (p<0.001), financial aspects of care (p = 0.006) and general satisfaction (p<0.001). There was no statistically significant difference in the time spent consulting with the doctors in both centre (p = 0.58).

Table 3: Comparing levels of satisfaction on various domains of general practice between the primary and tertiary health centres

Domains	GP Practice	N	Mean Rank	Sum of Ranks	Mann-Whitney U	P Value
Communication	PHC	645	688.86	444312.00	178758.00	< .001***
	THC	643	600.01	385804.00	0	
Consulting time	PHC	645	638.91	412094.00	203759.00	.583
	THC	643	650.11	418022.00	0	
Interpersonal	PHC	645	680.68	439041.50	182093.500	< .001***
	THC	640	605.02	387213.50		
Accessibility	PHC	643	769.76	494955.00	126826.000	< .001***
	THC	645	519.63	335161.00		
General satisfaction	PHC	643	681.46	438178.50	183602.500	< .001***
	THC	645	607.66	391937.50		
Technical quality	PHC	645	716.59	462203.00	160222.000	< .001***
	THC	642	571.07	366625.00		
Financial aspects of care	PHC	645	672.77	433938.50	189131.50	.006**
	THC	643	616.14	396177.50	0	
Total PSQ-18 Score	PHC	641	726.66	465788.50	189131.50	< .001***
	THC	631	544.91	343839.50	0	

Note: * - p<0.05, ** - <0.01, *** - <0.001, PHC – primary health centre, THC – tertiary health centre

From Table 4, the relationships between patient satisfaction on the various domains measured and their socio-demographic characteristics using the Kruskal-Wallis and Mann-Whitney U test were presented. Other predictors of patient overall satisfaction were younger ages (H = 8.23, df = 3, p = 0.04), those who are not in paid employment (H = 50.68, df = 2, p<0.001) and those with higher self-rated health status (U = 176,646.5, df = 1, Z = -3.82, p < 0.001).

Table 4 Relationship between patients' satisfaction with various domains and their socio-demographic factors

Predictors	Domains of general practice							
	Comm	Consulting time	I/personal manner	Access	General	Technical	Financial	Overall
Gender								
U (df)	183575(1)	179290(1)	180367(1)	181505(1)	181023(1)	176485(1)	177492(1)	178309(1)
P	0.97	0.44	0.73	0.74	0.63	0.26	0.29	0.92
Marital stat								
H (df)	0.64(2)	9.06(2)	3.07(2)	4.15(2)	2.13(2)	5.72(2)	1.86(2)	1.68(2)
P	0.73	0.01	0.22	0.13	0.35	0.06	0.39	0.43
Age								
H (df)	2.27(3)	15.26(3)	10.15(3)	1.21(3)	12.34(3)	7.40(3)	3.47(3)	8.23(3)
P	0.52	0.002	0.017	0.75	0.006	0.06	0.32	0.04
Schooling								
U (df)	107079(1)	123933(1)	112250(1)	120541(1)	120429(1)	117112(1)	114593(1)	117906(1)
P	0.001	0.91	0.02	0.44	0.47	0.16	0.05	0.49
Occupation								
H (df)	17.11(2)	9.41(2)	9.66(2)	22.60(2)	24.19(2)	48.06(2)	2.56(2)	50.68(2)
P	0.000	0.009	0.008	0.000	0.000	0.000	0.28	0.000
Perc hlt status								
U (df)	203826(1)	196805(1)	187688(1)	184529(1)	185678(1)	183365(1)	199934(1)	176646(1)
P	0.66	0.13	0.006	0.001	0.001	0.001	0.30	0.000

U = Mann Whitney U test, Z = Z score, P = p-value, df = degree of freedom, H = Kruskal Wallis Test, Comm = Communication, Perc = Perceived.

DISCUSSION

Our findings show that patients attending the primary care facility were significantly more satisfied with most of the domains of care like communication, interpersonal relationship, physical access, technical quality, financial aspect of care and general satisfaction. There was difference in the time spent with doctor between both practices. Other predictors of satisfaction identified from this study were younger age, those not on gainful employment and those with higher self-rated health status.

Patient satisfaction studies are the commonest research on patients' views on health care globally and in sub-Saharan Africa.[35, 36] Our finding suggests that patients are more satisfied with the quality of general practice services received at the primary health care institution compared with the

The Nigerian Health Journal

similar service provided in the tertiary health institution. This appears surprising as one would ordinarily expect a higher level of satisfaction with care received at a tertiary hospital because of the available expertise, technology and sophisticated procedures that can be obtained. The finding however demonstrates that health care quality is not simply connected with the sophistication of the technologies or procedures applied but in the capacity of health interventions to achieve goals that meet the expectations of patients.[37, 38]

Patients' satisfaction with communication with their doctors was higher at the health centre. This may have resulted from the lower demand for general practice care at the health centre when compared with the daily influx of patients that seek such services at the teaching hospital. High patient turnover, occupational stress and stringent work targets could affect the communication and interpersonal relationship between patients and providers. There is a link between communication capabilities of clinicians and patient satisfaction. Ineffective communication like unfriendliness and discourtesy by doctors, insufficient explanations on diagnosis and management protocol have been implicated in the dissatisfaction of patients with health care.[39, 40]

Satisfaction with access and convenience was significantly higher among health centre patient perhaps because of proximity of the health center to the residence of the people and shorter waiting time to get care. This may be an evidence of early success in the long term plan of ensuring the availability of functional health centre in every ward which are the smallest geopolitical subdivisions in Nigeria.[41]

Indeed, almost 90% of health facilities are primary health centres[42] which is unlike the tertiary health centre, having just one in most states which makes both physical and financial access difficult for those who prefer to use it for general practice care. Also, while doctors at the tertiary health institutions could be found only on their clinic days, patients could easily walk in and get attended to in the health centre by their doctors or health worker on seat. The less stressful consulting experience at health centres could provide explanation for the higher level of general satisfaction with the care offered here.

That finding that patients were more satisfied with technical quality at the health centre may be the result of the non-functional state of most of the sophisticated equipment available at the tertiary centre and also the higher 'mutual trust' existing with staff at the health centre. Findings are in consonance with those from a cross-sectional that assessed patient satisfaction with care services and also examined the effect of various dimensions on overall satisfaction evaluated using PSQ-18.[43]

Patients attending health centres pay less for care and often services are rendered free of cost. Satisfaction with care is affected to a great extent by the cost of care as those who pay for their care may be expecting more from the services and thus get easily dissatisfied with suboptimal service. The bureaucratic processes involved with making out-of-pocket payment for health care at the tertiary centre could also be the reason for the lower level of patient satisfaction with financial aspects of care. Furthermore, care processes, at the tertiary health centre which are often complex, fragmented and less cost-effective exerts extra burden on the patients. This out-of-pocket payment option at the point of access to health care had been linked with negative economic consequence especially for poorer households.[39]

The Nigerian Health Journal

The median ranking of satisfaction were higher for patients who attended the primary health centre in most domains but there was a paradoxical observation in the ranking within the groups. While the ranking of satisfaction for CHC patients was highest for accessibility (770) and least for consultation time (639), it was observed to be highest for consultation time (650) and least for accessibility (520) among those that attached the tertiary health centre. This finding may be explained by the availability of specialist family physicians consulting at the THC and the simpler bureaucratic processes involved with seeking care at the CHC. Patient satisfaction can vary with time and circumstances. A study that used the PSQ-18 to assess patient satisfaction with the management of sexually transmission infection in a zonal hospital in India, reported that patient satisfaction were highest for interpersonal relations (mean score = 3.25) and general satisfaction (mean score = 3.22) and lowest for financial aspects (mean score = 2.38) and accessibility (mean score = 2.59).[43]

Another predictor of satisfaction in this study was younger age of respondents. This is not in keeping with studies showing older patients being more satisfied.[31, 44, 45] On closer examination, most of these young respondents do not pay for health care themselves and may not expect as much as those who spent their hard earned resources to defray the cost of care. Also in keeping with our finding, higher self-rated health status had been associated with higher evaluation finding among adults attending health centres in Nigeria and Oman.[31, 41]

Strengths and limitations of the study

Study used an analytic cross-sectional design, robust sample size and a tool that is valid and reliable. Both facilities used in the study are run by doctors and have the same central management. Findings from this research should be interpreted with reference to the limitations of the cross-sectional study design and GP led primary health care systems.

Implications of the findings

There are a number of research, practice and policy implications of the findings from this study. These are summarised below:

Research implications

Future research may consider exploring the relationship between patients' satisfaction and their actual benefits of their encounter with care. There is need to ascertain patients' level of satisfaction with care at other departments in the teaching hospital and other health institutions across the country.

Practice implications

Available evidence demonstrates that PHC is the most cost-effective strategy for nations' quest for optimal health status of the citizens. However, financing and political considerations in Nigerian is abnormally skewed towards tertiary health service leaving the lower tiers underfunded, neglected and under-utilized. Our findings suggest that patients who receive general practice care from health centre were significantly more satisfied. These provide an imperative for strengthening PHC

The Nigerian Health Journal

systems and sensitize the populace on the need to seek promotive, preventive and curative services on continuing basis from the health centres.

There is need for regular professional development training programs for providers which should prominently feature the interpersonal aspects of care. Also, effective referral system should be established to discourage the overcrowding of tertiary hospitals.

Policy implications

Policies that will promote improvement in the infrastructures and the attainment of minimum standards in PHC centres nationwide should be put in place. This will positively affect patients' confidence in services rendered at these centres. There is need to formulate policy that would enhance linkages of different levels of health care delivery under the current multi-tier ownerships of primary, secondary and tertiary health facilities in Nigeria. Although the federal and state governments are increasingly getting involved in PHC, there need to be appropriate legislative framework for proper coordination of such partnerships. This would not only guarantee access to primary health care as a right of the citizens but would also enhance coverage and health protection for all.

CONCLUSION

Patients who received general practice care at the primary health centre were significantly more satisfied than those who did so at the tertiary health centre. Findings have implications in current efforts at restructuring health service delivery in Nigeria. We recommend more training of providers on the interpersonal aspect of care and increased sensitization on patients' utilization of primary health care systems as first contact, continuing, comprehensive and efficient personal and non-personal healthcare needs.

Conflict of Interest: None declared

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The Nigerian Health Journal